Nutrition News

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CENTRAL FILE

TEACHING NUTRITION

JENNIE I. ROWNTREE, Ph.D.
The University of Washington

Doctor Rowntree

Knowledge accumulated by a student is mere excess baggage unless it changes his viewpoints, broadens his horizon, or serves as a tool for work. The study of nutrition may do all three.

Effectively taught, a student senses that his laboratory is the whole world. He sees nutrition as a long term experiment beginning with the earliest records and continuing unabated into the future. The results of some human experiments are evident in the tragic history of non-agricultural people who were illy fed. Young people should realize the part good farms and good food have played in developing physical health and mental force—in fact, in furthering our civilization. If they learn to associate epidemics with restricted food supplies and to attribute shiftlessness to inadequate diets, they develop insight. Moreover, they become interested in the less fortunate of society and in the correction of social problems.

If possessed of normal intelligence, they will see that it is economy for this country to give all "an equal opportunity for health" through the provision of adequate food. They then relate nutrition to social needs and national planning and understand the purpose of surplus commodities.

These young people should be led to see that providing an abundant food supply from our scientifically managed farms—making good health possible for all—has been the foundation of our humanitarian attitude. Without good farms and good farmers producing health-giving foods our nutritional standards and our social idealism are worth little. Also, without careful preservation and economical distribution of food, the farmer works in vain for, in spite of plenty, citizens are not well fed.

The student can further see that mere abundance of foods in the markets does people little good unless they are taught to buy wisely at their income level. Here he sees the value of his nutritional knowledge as a tool of serving society educationally.

Furthermore, knowledge of the importance of food will dispel fear of poor health for it will promote a sense of mastery over his condition. His information should lessen gullibility, prevent his buying worthless products said to further health, and forestall faddism. With good health he will not worry over illness or its cost and will become more stable emotionally and financially.

If nutrition is to help him bring all his information into focus and teach him to reason, more emphasis on the integration and application of his knowledge and less on the details of nutrition would seem to be the teacher's job.

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Food MAKES A DIFFERENCE

A TRUE STORY

Under the inspiring guidance of the League of Nations, twenty-one countries have organized National Nutrition Committees to lead the way in a world-wide nutrition movement. This international movement is the greatest single force promoting better nutrition among all nations today.

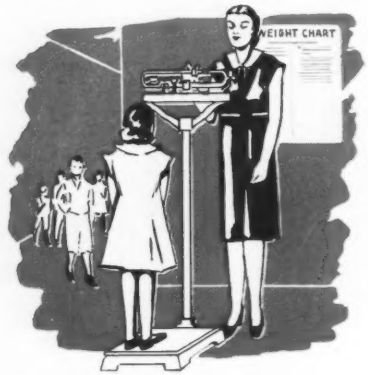
A school meal in Norway is one of the many examples of what is being done to improve the nutrition of children throughout the world. Because it was first tried in the Norwegian capital and served in the morning, it is known as the "Oslo Breakfast."

The meal includes milk, whole-grain bread, butter, cheese, and fresh fruit or vegetable in season. Professor Schiotz, eminent Norwegian scientist, planned the meal to supply all the foods necessary to supplement the home diet of the children to give them the foods needed for their best growth and development.

Amazing success was evident in a very short time! The children obviously were in better physical health and were mentally more alert.

Furthermore, the boys and girls in Norway today are from 2 to 3½ inches taller and from 2½ to 3¾ pounds heavier than the boys and girls in Norway fifteen years ago.

England, too, has long recognized the true value of a good diet including milk and other dairy products. Recently, the "Health Dinner," a new plan patterned on the "Oslo Breakfast," has been set up.



The "Oslo Breakfast" helps the girls and boys of Norway to grow

Milk, of course, is the center of this meal, with whole-grain or brown bread, butter, cheese, vegetable salad, and fresh fruit served every day.

The "Health Dinners" were rightly named. The health of the children showed immediate improvement!

Milk Receives World Attention

Of the seventeen countries who report steps taken to improve nutritional standards, thirteen stress the vital importance of milk in their programs.

England's campaign provides for milk for needy mothers and children and milk in industrial concerns, as well as in the schools.

In 1938, more than twice as many children in Hungary benefited from milk distribution than the previous year.

In Norway, the "Oslo Breakfast" plan—including milk in each case, of course—has been extended to many schools.

Latvia, Belgium, Iraq, and Finland have exerted most of their efforts toward improving the quality of dairy products. However, a campaign for the provision of milk in the schools of Belgium has been started.

France, the Netherlands, Uruguay, New Zealand, Scotland, and Egypt have all joined the parade of those who are bettering the health of their nations with milk.

One League report urging the use of greater quantities of milk and other protective foods, says: "Milk is the nearest approach we possess to a complete food. It contains all the materials essential for the growth and maintenance of life in a form readily assimilable by the body."

The encouragement given internationally to the production and consumption of milk is one of the most vital and effective means of improving national nutrition.

glances AT NUTRITION RESEARCH

Recent research on vitamin A has broadened our knowledge of its importance in human nutrition.

VITAMIN A USE

It has been found that the degree of absorption is widely different for carotene and vitamin A, and varies with intake, manner of administration, and health of the alimentary tract. Assimilation of carotene under normal circumstances is less efficient than that of the vitamin.

VITAMIN A NEED

Studies on vitamin A requirements of adults have revealed that the utilization of the vitamin A value of cooked peas is better than that of cooked spinach. Increasing the daily intake of thiamin and riboflavin did not appear to improve the utilization of carotene nor to diminish the vitamin A requirement. Marked increase or decrease in exposure of the eyes of normal adults to ordinary light sources was not accompanied by significantly altered requirements for vitamin A.

VITAMIN A FOR INFANTS

Minimum light thresholds of 53 infants have shown that infants receiving 135 to 200 vitamin A units daily had as good vision in the dark as infants receiving an average diet supplemented by 17,000 vitamin A units. The vitamin A requirement of these infants, ranging in age from 1½ to 13 months, seemed to be 135 to 200 units daily.

VITAMIN A IN BLOOD

Determinations of the amount of vitamin A and carotene in the blood of human subjects have shown that the amount of vitamin A in the fasting blood is dependent on the amount in the diet. Evidence as to whether or not blood determinations are of value in judging nutritional status is contradictory. The results show, however, that there is no correlation between the amount of vitamin A in the blood and the biophotometer readings.

A SCIENTIFIC STUDY

By Dr. Frederick F. Tisdall
Department of Pediatrics
University of Toronto

For some years it has been known that iron in different forms is not equally well utilized by the body. In an effort to find out whether the same holds true in regard to calcium, under carefully controlled conditions calcium in different forms — as calcium carbonate, calcium chloride, dicalcium phosphate, calcium lactate, calcium gluconate, whole milk powder and bone meal—was fed to rats. The animals' bodies were then ashed and the amount of calcium present determined. From these and other figures, it was possible to determine under the conditions of the experiments the percentage of the added calcium retained. The calcium retention was found to be essentially the same regardless of the form in which the calcium was fed.

Milk Causes Best Calcium Retention

Further studies were made on the role of milk as a source of calcium. Two diets were made up, the first comprising the foods which might be consumed by a 17-year-old boy but tea and coffee replacing milk, and the second diet exactly the same, plus the milk solids equivalent of 40 ounces of milk. The two diets were then dried and fed to rats under controlled conditions. The results obtained show that not only is the average human diet without milk not a good source of calcium, but the percentage of the calcium retained is less than in the same diet with added milk.

In this regard it is of interest to note that with the average 2500 calorie diet as usually consumed in the northern part of the United States and in Canada, if milk and cream are completely omitted, the diet will supply only between 250 and 300 milligrams of calcium. Sherman places the daily calcium requirements of adults at 450 milligrams per day, and advises a margin of safety of 50 per cent, making a dietary standard of 680 milligrams per day. Other workers suggest from balance experiments that the average adult in order to be in calcium equilibrium requires approximately 550 milligrams daily. Ten ounces of milk or cream supplies 330 milligrams of calcium, which added to the 250 to 300 milligrams supplied by the other foods

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Vitamin Concentrates — Over one hundred million dollars were spent by the American people for vitamin concentrates during the past year, said Dr. Lela Booher of the Bureau of Home Economics, speaking at the Congress on Industrial Health in Chicago, January 15. She pointed out that since all the essential food factors have not yet been discovered, vitamin concentrates cannot take the place of a well-balanced diet containing adequate amounts of the protective foods.

New Federal Nutrition Laboratories —In three new laboratories at Cornell University the U. S. Department of Agriculture will center investigations extending throughout the United States. An attempt will be made to increase the nutritional value of foodstuffs through studies of soil and crop management, soil types, and plant and animal nutrition. Those in charge believe that the investigations will lead eventually to the production of foods which contain all the nutrients which humans need for sound health.

American Women Getting Thinner —Statistics show that women of all ages are, on the average, 3 to 5 pounds lighter than they were 10 years ago. Part of this decrease in weight is ascribed to the influence of health education and fashion; but much of it has probably been caused by modification in eating habits—a gradual change from emphasis on quantitative caloric needs to the present consideration of qualitative needs, which stresses the value of the protective foods: milk, vegetables, fruits and eggs.

A PRACTICAL PLAN

By Mrs. Marion Sniffen
Polytechnic Elementary School
Pasadena, California

Children like to bring their lunches to school. Many parents have asked if it is possible to send in a lunch box a meal as adequate as that served by the school. To answer this question, we undertook for one week to examine the contents of over 100 lunch boxes chosen at random. A complete five day record was secured for 42 boys and 39 girls.

Of the 42 boys, the lunches of only five were up to standard. The rest were lacking in from one to eight food essentials. In four out of the five adequate lunches, adequacy was achieved by a large quantity of milk, the average being about a pint per meal.

Inadequate Milk in Poor Lunches

The ten most inadequate diets among the boys were low in from six to eight essentials. There was no milk in four of these diets, and less than one glass a day in five others.

In each instance where the diet has been analyzed and found adequate, a comparison with the child's monthly weight chart showed a satisfactory rate of gain for the year. Although most of the children judged underweight are in the beginning of the year persuaded to eat in the school dining room where better supervision of diet can be maintained, some bring their lunches and these were all found to be inadequate.

In the analyses of the girl's lunches which are completed, three out of 14 are adequate. These depend more on variety and less on the large quantity of food found in the boy's lunches.

To the question of the parent, "Shall I let my child take a lunch box?" I shall answer, "If you will choose foods very wisely it is possible to obtain satisfactory results with a lunch box provided the child has one thermos for milk and another for vegetables. Parsley should be chopped and added to your vegetable or sandwich filling as it is rich in vitamin A. Wheat germ bread or whole wheat bread should be used in place of white bread. Peanut butter fillings increase vitamin B_1. Milk and another good protein food should always be included. Raw fruits are the best desserts. Supply, if possible, generous quantities of the best foods you can find."

Child on Full Health Program

—that eleven synthetic and crystalline vitamins are now available? They were recently exhibited by the American Chemical Society in New York.

—that Americans eat more cheese than formerly? An average of 5.34 pounds per person has been used annually during the past five years.

—that contrary to popular belief, dairy cows do not drink much more water in hot weather than in cool weather?

—that thiamin (vitamin B_1) is reported to be of value in some cases of deafness?

—that in a recent radio poll, listeners indicated that the word "health" connoted happiness to a greater degree than any other word? This attitude explains the growing interest in public health and medical matters.

—that the whey of milk contains nearly 50% of the solids of milk? Whey is now being used in the manufacture of many products.

—that 31% of the total milk produced in 1937 was used in the manufacture of creamery butter? This was 1,790 million pounds more milk than the 1924 to 1929 average.

—that Swiss cheese is one of the most difficult of all cheeses to make? Certain bacteria are instrumental in forming the "eyes" in Swiss cheese and in developing the characteristic flavor.

—that a new camera judges bread and cake by taking a picture of the inside cell and crumb structure?

THINGS YOU'LL LIKE TO READ

THIS PROBLEM OF FOOD—Jennie I. Rowntree. Public Affairs Committee, 30 Rockefeller Plaza, New York City, 1939. 10¢.

Dr. Rowntree discusses what must be done to prevent malnutrition in families with low incomes. She stresses education in food values and meal planning as the best solution to the problem.

FOODS: THEIR NUTRITIVE, ECONOMIC AND SOCIAL VALUES—Harris and Henderson. Little, Brown and Company, 1939. $1.76.

Nutrition, meal planning, food buying and preparation are the major subjects covered in this book, designed for use with senior high school classes.

YOUR CHILD'S FOOD—Miriam E. Lowenberg. Whittlesey House, 1939. $2.50.

This book tells what to feed the child and how to get him to eat, and stresses the foundations of good food habits during the first year. A whole year's menus which have been used in the Nursery School at Iowa State College are included.

TEACHING NUTRITION

(Continued from Page Nine)

Students of all ages can easily learn what foods readily available within the family's income meet their needs. If requirements and the approximate amounts of each factor provided by common foods are presented in round numbers, this need consume little time. In a subject as essential to well-being as nutrition, simple presentation seems absolutely necessary. Knowledge should simplify, not complicate living. If students are to apply their knowledge in their homes, authentic bulletins on nutrition, simply written but containing all the fundamentals, should be given them for their own present and future use. School-owned text books are rarely available when most needed.

In teaching let us accent the result of specific deficiencies less and emphasize more the value of good diets in calming nerves, furthering digestion, and preventing infections. But let us also make it evident that a good diet is a simple thing to achieve.

May students of the future feel embarrassed when ill—ashamed that knowledge was so meagre or application of knowledge so faulty that sound bodies and sane minds should not be a reality.

Note—A mimeographed sheet containing references to all major items mentioned in NUTRITION NEWS may be obtained on request from the National Dairy Council, Chicago, Illinois.

A SCIENTIFIC STUDY

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will furnish just about the desired amount. For this reason, it is recommended that every adult should take each day at least 10 ounces (over ½ pint) of milk or cream. This does not mean that the milk needs to be taken as a beverage. It can be used in coffee, tea, chocolate or in the cooking.

One naturally asks what happens if one does not take this amount of milk and suffers a loss of calcium from the body. The answer is that nothing happens — for a week, a month, a year, or five years. A daily loss of 100 milligrams of calcium would require no less than 38 years for the body to lose all its calcium. So a small daily loss of this mineral will require many years before outstanding symptoms of this deficiency appears. In the medical literature are reports showing that "rheumatic pains" result from a loss of calcium from the bones. Recent articles have stressed the possibility that the frequency with which fractures occur in elderly people is due in many cases to demineralization of the bones.

These remarks are directed particularly to the adult. The need of large amounts of calcium for the growing child is universally recognized. The average properly fed child receives approximately 75 per cent of his calcium from milk and milk products, which means he should receive each day 1½ pints to 1 quart of milk.

From these facts one can conclude that although calcium in its different chemical forms is apparently equally well utilized, from a practical standpoint unless milk or a milk product such as cheese is included in the diet, not only the child but the adult will not receive an adequate supply of this essential mineral.